

DNA_Probe

Start

Initialisiere
DNA_Probe mit
Parametern

```
package dna;
```

```
import java.time.LocalDate;
```

```
public class DNA_Probe {
```

```
    private String DNASequenz;
```

```
    private int DNAIdentifikationsnummer;
```

```
    private String DNAFundort;
```

```
    private LocalDate DNAFunddatum;
```

```
    //Konstruktor
```

```
    public DNA_Probe(int identifikationsnummer, String dnaSquenez, String fundort, LocalDate funddatum, int DNAIdentifikationsnummer, String DNASequenz, String DNAFundort, LocalDate DNAFunddatum) {
```

```
        if (!isValidSequence(DNASequenz)) {
```

```
            throw new IllegalArgumentException("Ungültige DNA-Sequenz");
```

```
        }
```

```
        this.DNAIdentifikationsnummer = DNAIdentifikationsnummer;
```

```
        this.DNASequenz = DNASequenz;
```

```
        this.DNAFundort = DNAFundort;
```

```
        this.DNAFunddatum = DNAFunddatum;
```

```
    }
```

```
    //Überprüft ob die DNA-Sequenz gültig ist nach den Regeln aus der Aufgabenstellung
```

```
    private boolean isValidSequence(String sequence) {
```

```
        return sequence != null && !sequence.isEmpty()
```

```
            && sequence.length() % 3 == 0
```

```
            && sequence.startsWith("ATG")
```

```
            && (sequence.endsWith("TAA") || sequence.endsWith("TAG") || sequence.endsWith("TGA"))
```

```
            && sequence.indexOf("TAA", 1) == -1
```

```
            && sequence.indexOf("TAG", 1) == -1
```

```
            && sequence.indexOf("TGA", 1) == -1;
```

```
    }
```

```
    // Getter-Methoden
```

```
    public String getDNASequenz() {
```

```
        return DNASequenz;
```

```
    }
```

```
    public int getDNAIdentifikationsnummer() {
```

```
        return DNAIdentifikationsnummer;
```

```
    }
```

```
    public String getDNAFundort() {
```

```
        return DNAFundort;
```

```
    }
```

```
    public LocalDate getDNAFunddatum() {
```

```
        return DNAFunddatum;
```

```
    }
```

```
}
```

Überprüfen ob
DNA-Sequenz
valide ist

ja

nein

weise die Paramater
den Attributen zu

Fehlermeldung

Ende